REMARKS

Claims 1-50 are pending. Claims 26-39, 45, 46 and 50 have been withdrawn from consideration. Accordingly, Claims 1-25, 40-44, and 47-49 presently are under consideration. Claims 18 and 40 would be allowable if written in independent form.

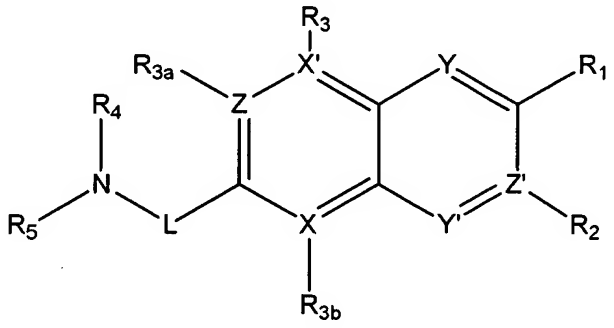
Applicant's attorney, Portia Chen, confirms the telephonic election wherein Applicant's attorney elected the invention of Group I without traverse. The species elected for search purposes was Example 31.

Claims 1 and 42 have been amended to delete non-elected subject matter. Claim 47 has been amended to claim a method of treating a condition or disorder modulated by the histamine-3 receptors in a mammal wherein the condition or disorder is Alzheimer's disease, attention-deficit hyperactivity disorder, cognitive dysfunction, cognitive deficits in psychiatric disorders, deficits of memory, deficits of learning, dementia, mild cognitive impairment, schizophrenia, and cognitive deficits of schizophrenia. Applicants respectfully request the Examiner to reconsider rejoining the indications of cognitive dysfunction, cognitive deficits in psychiatric disorders, deficits of memory, deficits of learning, dementia, and schizophrenia as such indication also are related to cognitive dysfunction. Applicants respectfully submit that including such indications in the claims would allow for more efficient prosecution of the methods of the invention and would not pose an undue burden with respect to searching the methods of the invention. Applicants respectfully reserve the right to file a divisional application on any subject matter not claimed in the application.

Claims 1-3, 8, 12, 16, 17, 19, 20, 22, 25, 44 and 47-49 stand rejected under 35 U.S.C. § 102(b) in view of Cheshire et al. (U.S. 6,300,352). Claims 1-3, 7-11, 13-17, 19-22, and 44 stand rejected under 35 U.S.C. § 102(b) in view of a reference to Denis M. Bailey (U.S. 4,327,022). Claims 1-11, 16, 17, 23, 24, 44, and 47-49 stand rejected under 35 U.S.C. § 103(a) in view of Cheshire et al.,

Kato et al. (WO 98/38156), and Azzolina et al. Applicants respectfully traverse the rejections.

Claims 1-17, 19-20, 22, and 25 are directed to compounds of formula (I) and various embodiments thereof. Claim 44 is directed to a composition comprising compounds of formula (I). Claims 47-49 claim methods for using compounds of formula (I). Claim 1, as amended, and claims depending thereon, are directed to compounds of formula:



(I)

or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof, wherein:

Y, and Y' are each independently selected from the group consisting of CH and CF;

X, X', Z, and Z' are each C;

one of R_1 and R_2 is selected from the group consisting of halogen, cyano, and L_2R_6;

the other of R_1 and R_2 is selected from the group consisting of hydrogen, alkyl, alkoxy, aryl, cycloalkyl, halogen, cyano, and thioalkoxy,

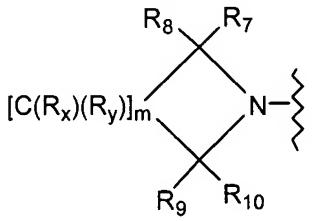
R_3 is selected from the group consisting of hydrogen, alkyl, alkoxy, halogen, cyano, and thioalkoxy;

R_{3a} is selected from the group consisting of hydrogen, methyl, alkoxy, halogen, and cyano;

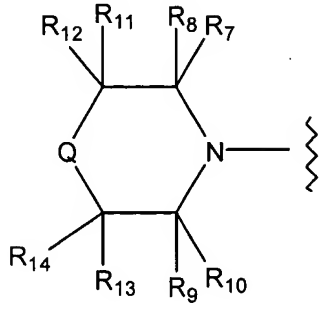
R_{3b} is selected from the group consisting of hydrogen, alkyl, alkoxy, halogen, hydroxy, cyano, and thioalkoxy;

R_4 and R_5 are each independently selected from the group consisting of alkyl, haloalkyl, hydroxyalkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, and

(NR_AR_B)alkyl, or R_4 and R_5 taken together with the nitrogen atom to which each is attached form a non-aromatic ring of the formula:



(a) or



(b) ;

R_6 is selected from the group consisting of aryl, heteroaryl, heterocycle, and cycloalkyl;

R_7, R_8, R_9, and R_{10} at each occurrence are each independently selected from the group consisting of hydrogen, hydroxyalkyl, fluoroalkyl, and alkyl; or one of the pair R_7 and R_8 or the pair R_9 and R_{10} is taken together to form a C_3-C_6 ring, wherein 0, 1, or 2 heteroatoms selected from O, N, or S replace a carbon atom in the ring;

R_{11}, R_{12}, R_{13}, and R_{14} are each independently selected from the group consisting of hydrogen, hydroxy, hydroxyalkyl, alkyl, and fluoro;

Q is selected from the group consisting of a bond, O, S, and NR_{15};

L is $-[C(R_{16})(R_{17})]_n-$ or $-[C(R_{16})(R_{17})]_pO-$;

L_2 is selected from the group consisting of a bond, -C(=O)-, -S-, $-[C(R_{18})(R_{19})]_q-$, -NH- and -N(alkyl)-;

R_{15} is selected from the group consisting of hydrogen, alkyl, acyl, amido, and formyl;

R_{16} and R_{17} at each occurrence are independently selected from the group consisting of hydrogen, alkyl, alkoxy, and fluoro;

R_{18} and R_{19} at each occurrence are each independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkoxy, and fluoro;

R_x and R_y at each occurrence are independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkoxy, alkylamino, dialkylamino, and fluoro, or one of R_x or R_y represents a covalent bond when taken together with R_x or R_y on an adjacent carbon atom such that a double bond is represented between the adjacent carbon atoms;

m is an integer from 1 to 5;

n is an integer from 1 to 6;

p is an integer from 2 to 6; and

q is an integer from 1 to 4;

and various embodiments thereof.

Cheshire et al. describe pyridine derivatives wherein pyridine indirectly is linked to a parent cyclic moiety via an oxygen or sulfur atom and hydroxy-substituted alkyl. Applicant's claims, as amended, are directed to compounds wherein one of R_1 and R_2 can be $-L_2R_6$, wherein R_6 can be aryl, heteroaryl, heterocycle, or cycloalkyl linked to a parent molecular moiety by a bond, --C(=O)-, -$[C(R_{18})(R_{19})]_q$-, -NH- and -N(alkyl)-, wherein R_{18} and R_{19} are selected from hydrogen, hydroxy, alkyl, alkoxy, and fluoro. The claimed compounds are not linked to the parent molecular moiety through a hydroxy-substituted alkyl group in connection with an oxygen or sulfur atom. Accordingly, Cheshire et al. do not describe or teach the claimed compounds as set forth in 35 U.S.C. § 102(b). Applicants respectfully request the Examiner to withdraw rejection of Claims 1-3, 8, 12, 16, 17, 19, 20, 22, 25, 44 and 47-49 in view of Cheshire et al.

Bailey et al. describe heterocyclic alkyl naphthol derivatives wherein an aroyl group is linked to a parent naphthalene group via oxygen, which affords a aryl-C(=O)O- substituent. Applicant's claims, as amended, are directed to compounds having a corresponding moiety to compounds having a corresponding moiety wherein one of R_1 and R_2 can be $-L_2R_6$, wherein R_6 can be aryl, heteroaryl, heterocycle, or cycloalkyl linked to a parent molecular moiety by a bond, --C(=O)-, -$[C(R_{18})(R_{19})]_q$-, -NH- and -N(alkyl)-, wherein R_{18} and R_{19} are selected from hydrogen, hydroxy, alkyl, alkoxy, and fluoro. The claims do not

recite an aryl-C(=O)O- substituent for $-L_2R_6$. Accordingly, Bailey et al. do not anticipate the claimed compounds as set forth in 35 U.S.C. § 102(b). Applicants respectfully request the Examiner to withdraw rejection of Claims 1-3, 7-11, 13-17, 19-22, and 44 in view of Bailey et al.

It is stated in the Office Action mailed 4/27/05 that teachings in Cheshire et al., when read further in view of Kato et al. (WO 98/38156), and Azzolina et al. would motivate one with skill in the art to prepare compounds claimed in Claims 1-11, 16, 17, 23, 24, 44, and 47-49 for treating Alzheimer's disease and other cognitive and memory impairment conditions. See, Office Action mailed 4/27/05, pages 13 – 16, and particularly page 15, last paragraph. Applicants respectfully disagree.

Cheshire et al. do not teach the claimed compounds for reasons described above. Further, as noted by the Examiner, Cheshire et al. do not describe compounds of formula (I), wherein one of R_1 and R_2 is $-L_2R_6$ and L_2 is a bond. Kato et al. describe amine derivatives as amyloid-beta production inhibitors. Azzolina et al teach dialkylaminoalkylnaphthalene and cycloaminoalkylnaphthalene derivatives wherein a dialkylamino group is linked to a naphthalene core via a hydroxy-substituted alkyl group or a cyclicamino group bonded to a naphthalene core and having a hydroxy substituent at the point of attachment in the cyclicamino group. Kato et al. describe methods for preparing aryl or heteroaryl groups linked to a bicyclic core via oxygen, nitrogen, or sulfur. Azzolina et al. describe methods that provide a hydroxy substituent to provide tertiary amino alcohols having only one stereogenic center. Neither Kato et al. nor Azzolina et al. disclose, discuss, or suggest methods for preparing a dialkylamino- or cyclicamino-alkyl group attached to a naphthalene core wherein the naphthalene core is further substituted with a group $-L_2R_6$, wherein L_2 can be a bond, --C(=O)-, $-[C(R_{18})(R_{19})]_q-$, -NH- and -N(alkyl)-, wherein R_{18} and R_{19} are selected from hydrogen, hydroxy, alkyl, alkoxy, and fluoro, and R_6 can be aryl, heteroaryl, heterocycle, or cycloalkyl. Accordingly, one with skill in the art would not be motivated to prepare the claimed compounds and methods for their

use in view Cheshire et al., Kato et al., or Azzolina et al. when read independently or in combination with each other. As such, Applicants respectfully request the Examiner withdraw the rejection of Claims 1-11, 16, 17, 23, 24, 44, and 47-49 under 35 U.S.C. § 103(a).

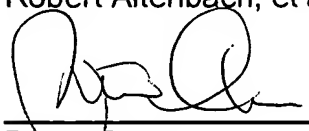
Claims 41 and 42 have been rejected in accordance with 35 U.S.C. § 112, second paragraph, for insufficient antecedent basis with respect to substitutions on the ring system. The definition of "heteroaryl" is defined in the specification on page 9, lines 10-23. Such definition clearly identifies that heteroaryl groups defined for the purposes of the specification can be substituted. Examples of substituents are listed therein. More particularly 2H-pyridazine-3-one-2-yl is specifically named on line 22. As such, it is respectfully submitted that as the claims are read in light of the definition sufficient antecedent basis exists to particularly point out and distinctly claim Applicants' invention as recited in Claim 41 and 42. Applicants respectfully request the Examiner to withdraw the rejection of Claims 41 and 42.

Claims 1-3, 6-8, 11-25, 40-44, and 47-49 have been provisionally rejected under the judicially created doctrine of obviousness type double patenting in view of U.S. Patent Application No. 10/292,422. U.S. Patent Application No. 10/292,422 no longer is pending. Accordingly, Applicants respectfully submit the rejection has been rendered moot.

For the foregoing reasons, Applicants respectfully request the Examiner to reconsider the application and withdraw the claim rejections. Applicants respectfully submit the application is in a condition for allowance and respectfully request notification thereof.

Applicants expressly reserve the right to file divisional applications on any non-pending or non-elected subject matter in the application. A marked-up copy of all the claims with the current status as shown is provided herewith for the convenience of the Examiner. Should the Examiner have any questions or concerns regarding the foregoing, he is respectfully invited to contact the undersigned by telephone at the phone number provided below.

Respectfully submitted,
Robert Altenbach, et al.



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